

62, 64-66, and 70 by rewriting same to read as follows.

--1. (Amended) A recording medium on which digital data has been recorded in synchronism with pre-recorded address data characterized in that at least a portion of said address data that has been recorded was converted on a basis of a pre-set conversion rule.

Al --2. (Amended) The recording medium according to claim 1 wherein

information indicating an area where there is recorded said address data that was converted in accordance with said pre-set conversion rule is recorded on the recording medium.

1 --3. (Amended) The recording medium according to claim 1 wherein

said pre-set conversion rule is to record said address data in a decrementing order.

1 --4. (Amended) The recording medium according to claim 1 wherein

said pre-set conversion rule is that, when all said address data to be converted is expressed with a same number of bits, information of bits corresponding to the same bits of the address data to be converted is rewritten and recorded.

--5. (Amended) The recording medium according to claim 1 wherein

said pre-set conversion rule is to record said address data upon conversion by a pre-set key information.

--6. (Amended) The recording medium according to claim 5 wherein

said pre-set key information has been recorded on the recording medium.

--7. (Amended) The recording medium according to claim 1 wherein

in an area of the recording medium in which has been recorded said address data that was converted in accordance with said pre-set conversion rule, at least one of control information necessary for reproducing said digital data, copyright information, and information for decrypting encrypted digital data is recorded.

--8. (Amended) The recording medium according to claim 1 wherein

said address data is pre-recorded as pre-pits on said recording medium.

--9. (Amended) The recording medium according to claim 1 wherein

said address data comprises pre-recorded embossed marks on said medium.

--10. (Amended) The recording medium according to claim 1 wherein

said address data is pre-recorded by wobbling a groove formed in said recording medium.

--11. (Amended) The recording medium according to claim 1 wherein

said digital data is recorded on the recording medium [on] using 8-16 modulation and encoding by a product code.

--12. (Amended) An apparatus for preparing a master disc of a recording medium on which digital data is recorded in synchronism with pre-recorded address data, said apparatus comprising:

pre-format signal generating means for generating pre-format signals pre-recorded on said recording medium, said pre-format signals containing said address data; and

recording means for recording said pre-format signals from said pre-format signal generating means on the master disc, wherein

said pre-format signal generating means converts at least a portion of said address data in accordance with a pre-set conversion rule to generate said pre-format signals.

--13. (Amended) The apparatus for preparing a master disc according to claim 12 further comprising:

address generating means for generating said address data;

and address conversion area designating means for designating an address data conversion area in accordance with said pre-set conversion rule, wherein

said pre-format signal generating means includes:

address comparator means for comparing address data generated by said address generating means with address data of an area specified by said address conversion area designating means; and

address conversion means for converting the address data generated by said address generating means, in accordance with said pre-set conversion rule, based on results of a comparison by said address comparator means.

--14. (Amended) The apparatus for preparing a master disc according to claim 13 wherein

when, as a result of the comparison by said address comparator means, the address data generated by said address generating means is verified to be contained in the area specified by said address conversion area designating means, said address conversion means converts the address data generated by said address generating means in accordance with said pre-set conversion rule.

--15. (Amended) The apparatus for preparing a master disc

according to claim 12 further comprising:

address conversion area designating means for specifying an address data conversion area based on said pre-set conversion rule, wherein said recording means records information specifying an area specified by said address conversion area designating means as said pre-format signals on the master disc.

--16. (Amended) The apparatus for preparing a master disc according to claim 12 wherein

said pre-set conversion rule is to record said address data in a decrementing order.

--17. (Amended) The apparatus for preparing a master disc according to claim 12 wherein

said pre-set conversion rule is that, when all said address data to be converted among the pre-recorded address data is expressed with a same number of bits, information of bits corresponding to the same bits of the address data to be converted is rewritten and recorded on said master disc.

--18. (Amended) The apparatus for preparing a master disc according to claim 12 wherein

said pre-set conversion rule is to record said address data upon conversion using pre-set key information.

AD --20. (Amended) The apparatus for preparing a master disc according to claim 12 wherein

at least one of control information used for reproduction of said digital data, copyright information, and information for decrypting encrypted digital data is recorded in an area in which said address data is converted in accordance with said pre-set conversion rule.

AB --24. (Amended) A method for preparing a master disc used for manufacturing a recording medium on which digital data has been recorded in synchronism with pre-recorded address data, said method comprising the steps of:

converting at least a portion of said address data based on a pre-set conversion rule;

generating pre-format signals for recording on said master disc, said pre-format signals containing said address data; and

recording the generated pre-format signals on said master disc.

--25. (Amended) The method for preparing a master disc according to claim 24 further comprising the steps of:

generating said address data and designating an area for conversion of said address data based on said pre-set conversion rule; and

comparing the generated address data with address data of the

designated area and converting the generated addresses based on of the step of comparing in accordance with said pre-set conversion rule.

A^B --26. (Amended) The method for preparing a master disc according to claim 25 wherein

when, as a result of said step of comparing the generated address and the designated area, it is verified that the generated address data is within said specified area, said generated address data is converted in accordance with said pre-set conversion rule.

--27. (Amended) The method for preparing a master disc according to claim 24 wherein

information indicating in area for conversion of said address data based on said pre-set conversion rule is recorded as said pre-format signals on said master disc.

--28. The method for preparing a master disc according to claim 24 wherein

said pre-set conversion rule is to record said address data in a decrementing order.

--29. (Amended) The method for preparing a master disc according to claim 24 wherein

said pre-set conversion rule is that, all of the address data

AB to be converted among the pre-recorded address data is expressed with a same number of bits, information of bits corresponding to the same bits of the address data to be converted is rewritten and recorded.

--30. (Amended) The method for preparing a master disc according to claim 24 wherein

said pre-set conversion rule is to record said address data upon conversion using pre-set key information.

AB --32. (Amended) The method for preparing a master disc according to claim 24 wherein

at least one of control information used for reproduction of said digital data, copyright information, and information for decrypting encrypted digital data is recorded in an area in which said address data is converted in accordance with said pre-set conversion rule.

AB --36. (Amended) An apparatus for recording digital data on a recording medium in synchronism with pre-recorded address data, said apparatus comprising:

recording signal generating means for generating recording signals to be recorded on said recording medium, wherein

said recording signal generating means detects an area in said recording medium where at least a portion of said address data is

recorded upon conversion in accordance with a pre-set conversion rule and said recording signal generating means decodes the converted address data pre-recorded in said area to generate said recording signals in accordance with the decoded address data.

AB --37. (Amended) The recording apparatus according to claim 36 further comprising:

data generating means for generating said digital data, wherein

said recording signal generating means includes:

address reproducing means for reproducing said address data from a signal read out from said recording medium;

address conversion area readout means for detecting and reading out an area of said recording medium where there is recorded the address data converted from the signal read out from the recording medium in accordance with said pre-set conversion rule;

address decoding means for decoding address data reproduced by said address reproducing means; and

address comparator means for comparing the address data of said digital data generated by said data generating means to address data decoded by said address decoding means.

--38. (Amended) The recording apparatus according to claim 37 wherein

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when the address data reproduced by said address reproducing means is derived from the area of said recording medium where the address data is recorded upon conversion based on said pre-set conversion rule, said address decodes means decoding the address data reproduced by said address reproducing means in accordance with the pre-set conversion rule.

--39. (Amended) The recording apparatus according to claim 37 wherein

when, as a result of a comparison by said address comparator means, address data of digital data generated by said data generating means is verified to correspond to address data decoded by said address decoding means, said recording signal generating means generates said recording signal.

--40. (Amended) The recording apparatus according to claim 36 wherein

said pre-set conversion rule is to record said address data in a decrementing order.

--41. (Amended) The recording apparatus according to claim 36 wherein

said pre-set conversion rule is that, all the address data to be converted among the pre-recorded address data is expressed with a same number of bits, information of bits corresponding to

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the same bits of the address data to be converted is rewritten and recorded on said master disc.

--42. (Amended) The recording apparatus according to claim 36 wherein

said pre-set conversion rule is to pre-record said address data on conversion using pre-set key information.

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--44. (Amended) The recording apparatus according to claim 36 wherein

at least one of control information used for reproduction of said digital data, copyright information, and information for decrypting encrypted digital data is recorded in an area in which said address data is converted in accordance with said pre-set conversion rule.

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--49. (Amended) A method for recording digital data on a recording medium in synchronism with pre-recorded address data, said method comprising the steps of:

detecting an area of said recording medium where at least a portion of said address data is recorded upon conversion in accordance with a pre-set conversion rule;

decoding the converted address data pre-recorded in said area;
and

generating recording signals to be recorded on said recording medium in accordance with decoded address data.

--50. (Amended) The recording method according to claim 49 further comprising the steps of:

generating said digital data, reproducing said address data from a signal read out from said recording medium, detecting and reading out the area of said recording medium where said address data converted in accordance with said pre-set conversion rule are recorded, decoding the reproduced address data and comparing the address data of the generated digital data to the decoded address data.

--51. (Amended) The recording method according to claim 50 wherein, when the reproduced address data is from an area of said recording medium where the address data is recorded upon conversion in accordance with said pre-set conversion rule, the reproduced address data is decoded in accordance with said pre-set conversion rule.

--52. (Amended) The recording method according to claim 50 wherein

when, as a result of comparison, the generated address data is verified to correspond to decoded address data, said recording signal is generated.

--53. (Amended) The recording method according to claim 49 wherein

said pre-set conversion rule is to record said address data in a decrementing order.

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--54. (Amended) The recording method according to claim 49 wherein

said pre-set conversion rule is that, when all the address data to be converted among the pre-recorded address data is expressed with a same number of bits, the information of bits corresponding to the same bits of the address data to be converted is rewritten and recorded on said recording medium.

--55. (Amended) The recording method according to claim 49 wherein

said pre-set conversion rule is to pre-record said address data upon said recording medium on conversion using a pre-set key information.

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--57. (Amended) The recording method according to claim 49 wherein

at least one of control information used for reproduction of said digital data, copyright information, and information for decrypting encrypted digital data is recorded in an area in which said address data is recorded upon conversion in accordance with

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said pre-set conversion rule.

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--61. (Amended) The recording method according to claim 49 wherein

said digital data is recorded using said recording medium on 8-16 modulation and encoding by a product code.

--62. (Amended) A disc-shaped recording medium comprising:
a first area in which data is to be recorded; and

a second area in which is recorded information at least including control information required for reproducing data recorded in said first area,

wherein address data are pre-recorded in said first and second areas and at least a portion of the address data in said second area is converted in accordance with a pre-set conversion rule.

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--64. (Amended) The disc-shaped recording medium according to claim 62 wherein

said pre-set conversion rule is to record said address data in a decrementing order.

--65. (Amended) The disc-shaped recording medium according to claim 62 wherein

said pre-set conversion rule is that, all of the address data to be converted among the pre-recorded address data is expressed